

Attorney Docket 87181RLO
Customer No. 01333

REMARKS

By this amendment claims 1-2, 5-11, and 14-16 have been amended to more clearly set forth the invention. Claims 4 and 13 have been cancelled. Claims 17-25 have also been cancelled as being drawn to a non-elected invention.

Claims 1-7 and 9-15 were rejected under 35 USC 102(b) as anticipated by or, in the alternative, under 35 USC 103(a) as obvious over Kamiyama et al (USPN 6,340,501). Claim 9 was rejected under 35 USC 103(a) as being unpatentable over Kamiyama et al in view of Peng (USPN 6,467,427). Claims 1, 3-7, 10 and 12-15 were rejected under 35 USC 102(b) as anticipated by, or in the alternative, under 35 USC 103(a) as obvious over Yamazaki et al (US 2002/0132047). Claims 8 and 16 were rejected under 35 USC 103(a) as being unpatentable over Yamazaki et al in view of TDK (EP 0982411) and Grant et al (US 2003/0116091).

Claim 1 is similar to claim 10 with the exception that claim 10 vaporizes a plurality of organic materials. As amended claim 1 now requires that the first region is cooled to maintain the first region below the vaporization temperature.

Turning to Kamiyama et al in Fig. 8, material is placed on a belt and preheated by heater 204 and then delivered above the heater 206. Kamiyama et al teach in col. 15, line 57 that organic material which are pigments should not be heated abruptly but gradually and moderately. Such gradual heating promotes thermal distillation of pigments. In Figs. 9-13 of Kamiyama et al there are discrete heating crucibles which are movable to a deposition position. These crucibles are heated and heat is conducted to the organic material. There is no cooling structure associated with the deposition. Kamiyama et al do cool down the crucible after deposition. There is no metering in these figures from a first region into a second region and moreover, there is not a steep thermal gradient across the thickness of the organic material between the first and second regions. In fact Kamiyama et al teach against this feature since they require a more gradual heating process. In the Fig. 8 arrangement, all of the material is not vaporized and waste material is shown by Kamiyama et al. A scraper blade is also required to recover unvaporized particles.

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It should be noted that claim 10 includes features of claim 1 but also covaporizes multiple component organic materials in a mixture.

It is true that Peng uses a drum but the drum is not heated or cooled and Applicants fail to see how this arrangement can even be combined with Kamiyama et al. The drum in Peng does not participate in the vaporization process. Peng has only one heater. Accordingly, it is believed that claim 9 in combination with claim 1 is also unobvious.

Yamazaki et al relates to purifying and then forming a film or layer of organic materials. As shown in Fig. 1, in Yamazaki et al provide a sample of material that is heated by a movable heater to melt the material. The impurities are removed and gate 103 is opened and the pure material is again heated to act as a vaporization source. There is no structure for metering as required in claims 1 and 10. Further a steep gradient is not produced and still further a cooling process is not applied to one region and then heating to another region during vaporization. Accordingly, Yamazaki et al fail to disclose or suggest the subject matter set forth in claims 1 and 10.

The Examiner states that TDK includes a crucible housing solid organic material which is heated during the vaporization process. During the heating process, the crucible can also be cooled with a gas. There is only one temperature zone experienced by the organic material. The purpose of TDK's cooling is to maintain the temperature experienced by the organic material at a desired level. Because of the type of material that is being used this is said to provide improved response time. In other words, TDK is using cooling to maintain the vaporization temperature at a desired level. There is only one region D in TDK. Further there is no metering of material. Applicants fail to see how TDK can be combined with any reference cited by the Examiner to suggest the present invention.

Grant et al teaches that a liquid cooling jacket is used for cooling a vaporization source. Grant et al atomizes a liquid into a heated zone. The liquid can be cooled prior to atomization to prevent prevaporization. See paragraph 0011. This is an entirely different vaporization process than employed in the present invention which vaporizes solid organic materials. Grant et al's atomization process is intended for chemical deposition using an organic liquid

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mixture which includes a solvent. The mist is delivered to a CVD chamber where a subsequent CVD process provides a film. The CVD process is distinctly different from the present invention which is evaporation and recondensation as opposed to chemical vapor processing.

Claims 2 and 11 require a permeable member through which vaporized material passes. The Examiner's contention is that Kamiyama et al have a permeable member but this is where the solid material is delivered to the belt in Fig. 8. Therefore, there is no suggestion in Kamiyama et al or the other references for the particular location of the permeable member as required by these claims.

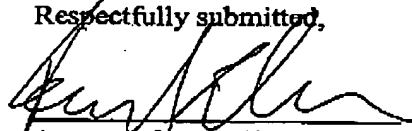
With respect to claims 3 and 12 the vaporization is interrupted. In Kamiyama et al deposition is interrupted by a shutter but vaporization continues and material condenses on the shutter. This highlights a significant advantage of the present invention which eliminates the need for a shutter while at the same time conserving material.

The remaining claims all depend either on claim 1 or claim 10 and should be allowed along with their base claim.

It is believed that these changes now make the claims clear and definite and, if there are any problems with these changes, Applicants' attorney would appreciate a telephone call.

In view of the foregoing, it is believed none of the references, taken singly or in combination, disclose the claimed invention. Accordingly, this application is believed to be in condition for allowance, the notice of which is respectfully requested.

Respectfully submitted,



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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.